ENGINEERING TECHNICIAN GS-0802-09

WORK MANAGEMENT

I. POSITION AND ORGANIZATION INFORMATION

Position:

Engineering Technician, GS-0802-09

Purpose of position:

The position performs nonprofessional technical work in functions such as research, development, design, evaluation, construction, inspection, production, application, standardization, test, or operation of engineering facilities, structures, systems, processes, equipment, devices or materials.

Organization:

Workload Operations Management Branch

Organization goals:

II. MAJOR DUTIES

A. Duty:

Responsible for customer interface, the definition of requirements, and the development of designs, plans, and specifications for facility projects requiring the independent application of background data, the interpretation and use of numerous precedents, and the coordination of several skills and trades, e.g., electricians, plumbers, heating and air conditioning mechanics, etc. Projects typically involve moderately complex engineering work on relatively large real property facilities and systems characterized by the need for frequent and substantial changes to or deviations from original plans and specifications. Projects typically include but are not limited to clinics, military family units, industrial shops, warehouses, drainage system and sewers, utilities, grounds maintenance, surface pavements, roads, sidewalks, and other related engineering work as required to support installation/base facilities. ~~100%~~ 45%

Tasks:

1. Conducts on-site surveys of assigned base/installation facilities, identifying both short and long range work requirements while considering the present and future mission of the facility.

2. Conducts interviews with facility end users to determine and identify requirements prior to proceding with the development designs, plans, and specifications for facility projects.

3. Estimates resource requirements, e.g., manhours, equipment, and supply funds, needed to address facility maintenance and future construction.

4. Prepares plans, specifications, and cost estimates for work orders, work requests, and contract projects which involve modifications, alterations, renovations, or additions to base/installation facilities.

5. Reviews previous blueprints, specifications, drawings, and plans;

considers possible courses of action and selects the most appropriate methods to be employed. Develops necessary design drawings or revises existing drawings. Verifies requirements, and assures accurate dimensions and that the work can be accomplished by the contractor.

6. Consults directly with contractor personnel in developing progress schedules and in keeping the construction process on schedule. Inspects and ensures contractor compliance with contract requirements and takes all action necessary in processing changes to contract requirements.

7. When required, initiates a preliminary Environmental Impact Assessment based on project impact.

B. **Duty:**

Responsible for the development of preliminary and detailed cost estimates for portions of unconventional and difficult civil and military projects for which historical information is available for guidance, but where frequent deviations from original project plans and specifications may be encountered. Exercises a practical knowledge in the area of construction cost estimating requiring a thorough understanding of the construction process, materials, and operations, and a working knowledge of mathematical formulas and principles. Finished estimates are considered in most instances to be complete products. ~~(10%)~~ 30

Tasks:

1. Develops fair and reasonable cost estimates covering such elements as labor costs, construction materials, quantities of earth and similar elements.

2. Analyzes and extracts data from existing sources such as technical manuals, regulations, engineering handbooks, catalogs, previous design computations, and other related areas.

3. Obtains and evaluates costing information from other organizational elements in assuring that developed estimates are relevant to approved plans and established needs.

4. Reviews and ensures the technical accuracy and completeness of cost estimate data. Provides guidance to organization personnel on methods and procedures used in the preparation and submission of data and reports for estimates.

5. Makes field trips for sight investigation studies.

C. **Duty:**

Screens requests for estimates and work by the Facilities Management Division in the following area: scope of the job, legality, and necessity. (15%)

Tasks:

1. Compiles and maintains information for usage in estimating, improving estimating techniques, and ordering proper materials, files and records relating to screening, planning, or estimating.

D. **Duty:**

Prepares complete contract specification packages for construction and supply contracts for a variety of civil works and military projects which are routine or conventional in nature, but are characterized by the need for frequent changes to or deviations from original specifications. Work requires the application of a practical knowledge of the methods and techniques of engineering, architecture, and construction. (10%)

Tasks:

1. Coordinates and reviews the preparation of final specifications in prepares in rough form by design engineers and architects for a variety of civil works and military construction and supply contracts.

2. Reviews specifications for compatibility with drawings, accuracy and completeness of material references, and possible conflicts. Makes recommendations for design modifications to conform with edstablished practices or agency standards.

3. Prepares amendments to Invitation for Bids and Requests for Proposal and revisions to specifications for modifications to contracts. Coordinates amendments with project engineers and contract personnel.

4. Maintains close contact with design staff engineers and architects, project engineers, contract administrators, and architect-engineering firm personnel for the purpose of ascertaining intent of design, and suitability of materials and equipment.

5. Reviews or assists in reviewing contractor claims to determine validity in comparison to contract plans and specifications.

E. **Duty:**

Performs other duties as assigned. ~~(5%)~~ 10

III. CLASSIFICATION FACTORS

Factor 1. Knowledge

1. Requires a considerable practical knowledge of a wide range of engineering methods, principles and practices and the ability to apply this knowledge to the accomplishment of difficult, but well-precedented projects.

Factor 2. Supervisory Controls

The technician works under the general supervision of a higher graded technician/engineer or supervisor. Work assignments require the technician to use initiative and resourcefulness in their planning and execution. The technician is expected to independently select, interpret, and apply engineering technical concepts and methods where precedents are not fully applicable. The individual receives instructions and/or information on unfamiliar practices and problems, and closer than normal guidance regarding new or significantly changed assignments. Where the work assigned is similar to previous assignments, the technician is relied upon to complete the assignment without explicit instructions as to work methods. New and

significantly changed work aspects are intensively reviewed for technical adequacy. Recurring aspects of the work are occasionally observed and subject only to spot checks for adequacy.

Factor 3. Guidelines

The technician follows established guidelines such as policies, procedures, directives, manuals, and drawings which are largely self-applying. The number and similarity of guidelines and work situations require the technician to use judgement in locating and selecting the most appropriate guidelines, references, and procedures for application and in making deviations to adapt the guidelines to specific cases. Where significant deviations are required, the technician refers the problem to the supervisor or higher graded technician/engineer along with proposed solutions.

Factor 4. Complexity

Assignments are characterized as being difficult projects, requiring independent action by the technician in executing the assignment. Considerable knowledge of and the ability to apply a full range of pertinent engineering principles and techniques is required. Work processes are relatively complex, although problems are generally solved through the application of standard engineering techniques and practices.

Factor 5. Scope and Effect

The work involves addressing a variety of difficult but standard problems, questions, or situations in conformance with established techniques and practices. Assignments encompass a broad range of basic engineering activities. The work product or service affects the planning, design, testing, development, construction and/or installation of systems, facilities or equipment.

Factor 6. Personal Contacts

Personal contacts include a variety of officials, managers, or professionals of other agencies and outside organizations. Typical of these contacts are manufacturers' representatives, private firms, and engineers from other Federal agencies and state, county, and local governments.

Factor 7. Purpose of Contacts

The purpose of the contacts is to provide advice to individuals on noncontroversial issues or concerns. Contacts typically involve such matters as providing advice on work efforts, or developing recommendations for resolving operating conditions or system problems.

Factor 8. Physical Demands

The work is sedentary. The employee may sit comfortably to do the work. However, there may be some walking, standing, bending and carrying of light items such as papers and books. No special physical demands are required to perform the work.

Factor 9. Work Environment

The work environment involves everyday risks or discomforts which require normal safety precautions typical of such places as offices and meeting rooms. The work area is adequately lighted, heated, and ventilated.

IV. CLASSIFICATION SUMMARY

In this position:

The supportable grade is GS-09 because 80% of the work is at or above the GS-09 grade level. 80% of the duties are at the GS-09 grade level. 15% of the work is not grade controlling. 5% of the work could not be evaluated.

Duty A. 60% GS-0802-09 Civil Engineering Technician
Facility Maintenance, Repair, and Construction

Duty B. 10% GS-0802-09 Civil Engineering Technician
Cost Estimates

Duty C. 15% GS-User defined duty. Not classified by system. The final grade may or may not be appropriate.-
Screens requests for estimates and work

Duty D. 10% GS-0802-09 Civil Engineering Technician
Specifications

List of Modified Duties and Factors:

Title has been edited and may or may not be appropriate.
Duty C. has been added.

The classification criteria for this position are based on the US OPM Position Classification Standard for the Engineering Technician Series, GS-802, dated June 1969 (TS-80).

GS-09
Grade: GS-09